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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/002,080 | 10/31/2001 | Kevin S. Stein | 4470-00613 | 3540 |

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| EXAMINER |
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KILKENNY, TODD J

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| ART UNIT | PAPER NUMBER |
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1733

DATE MAILED: 04/09/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/002,080

Applicant(s)

STEIN ET AL.

Examiner

Todd J. Kilkenney

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Marschke (US 6,149,751)

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

Referring to the embodiment of Figure 7, Marschke discloses maintaining the freshly glues single face web (100) in contact with the heated bonding roll (90) with a wrap arm device which allows the single face to be adjustably wrapped around a circumferential portion of the bonding roll. Included in this wrap arm device is an idle roller (103). It appears that idle roller (103) reads on applicant’s “contact roller” as it is mounted downstream of the line of initial tangent contact and when wrapped around the

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bonding roll appears to press the single face web and medium web against the bonding roll.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1 – 3 and 5 – 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isowa (GB 2,308,392) in view of Osgood (US 3,919,029).

Isowa teaches a single-faced corrugated sheet making machine that includes first and second corrugating rolls (12 and 14) for forming corrugations on a core paper web (16), a pasting mechanism for pasting the crest portions of the corrugated paper web, and two pressure rolls (34 and 36) which are disposed on the outer surface of the second corrugating roll (14) to press and stick a liner (26) to the core paper web (see Figures; Page 9, lines 5-34). The second pressure roll (36) is recognized as reading on applicant's claimed "contact roll" as it is mounted downstream of the line of initial tangent contact of the liner web and acts to press the liner web against the corrugating roll (14). It appears that Isowa teaches all the limitations of claim 1, with the exception of disclosing that the corrugated roll (14) is heated.

Osgood teach a single facer machine for manufacturing single face corrugated paperboard is applied as evidence that it is known in the corrugated art to employ heated corrugated rolls to aid in shaping the core webs and bonding the core webs to

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liners (Col. 3, lines 41-43). It therefore would have been obvious to one of ordinary skill in the art at the time of the invention to heat the corrugating roll (14) of Isowa as such is well known in the art as evidenced for example by Osgood so as to aid in the shaping of the core web and aid in providing heat to the bonding adhesive.

As to claims 2, 3, 5, 7 – 9, Isowa teach positioning said pressure roll (36) on a moving frame (38) which is constructed to be movable with respect to the frame body which holds the corrugating rolls, wherein the pressure roll (36) is controllable to be moved between an operating position near the corrugating roll (14) and a retracted position apart from the corrugating roll (14). Isowa further teach that pressure roll (36) is independently movable to approach and separate from the corrugating roll by an eccentric mechanism (40) and disclose the pressure roll includes a rotating axis inserted into a through hole of a lace (42) that is rotatably pivoted at the moving frame (38) via bearing (44). It appears Isowa further discloses the use of gears and a motor (e.g. an actuator) to work through the lace to cause the pressure roll to eccentrically move (Page 11, line 10 – Page 12, line 3).

As to claim 6, Osgood is cited as evidence that as an alternative to mechanical means, a pneumatic cylinder may be used to exert force on a pressure roll to bias said pressure roll against a corrugating roll (col. 3, lines 34-40). It therefore would have been obvious to one of ordinary skill in the art at the time of the invention to alternatively employ a pneumatic cylinder as the actuator of Isowa as Isowa's embodiment of employing gears and motors appears to be exemplary in nature, wherein Osgood discloses that pneumatic cylinders are known alternatives to mechanical means and

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one of ordinary skill in the art would readily appreciate that only the expected results would be achieved.

As to claim 11, Isowa does not positively disclose the nip pressure force exerted by the second pressure roll onto the corrugating roll (14). However, absent any unexpected results, it is the position of the examiner that the force magnitude exerted by the pressure roll is no more than a routine parameter one of ordinary skill in the art would have been motivated to employ so as to achieve adequate pressure between the second pressure roll (36) and the single face web of the liner to achieve effective bonding without over pressing to undesirably affect the webs or adhesive.

5. Claims 4 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Isowa (GB 2,308,392) in view of Osgood (US 3,919,029) as applied to claims 1 - 3 and 10 above, and further in view of Araki et al (US 6,476,151 B1).

Neither Isowa nor Osgood appear to disclose what materials the pressure roll and in particular the outer surface of the pressure roll comprise. However, as disclosed by Araki et al pressure rolls having an outer coating material comprising an elastic layer of silicone rubber, fluorine-containing rubber, urethane rubber or EPDM offer not only flexibility, heat resistance and abrasion resistance but also nonsticking property and oil resistance (see abstract). One of ordinary skill in the art would have readily appreciated a rubber coated roll offering such improved properties would have been pertinent to a variety of lamination processes, including facing a corrugated web, and therefore such would have been obvious to one of ordinary skill in the art at the time of the invention to employ as the second pressure roll of Isowa so as to achieve

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a pressure roll not only having flexibility, heat resistance and abrasion resistance but also nonsticking property and oil resistance.

Conclusion


6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Todd J. Kilkenny** whose telephone number is **(703) 305-6386**. The examiner can normally be reached on Mon - Fri (9 - 5).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Ball can be reached on (703) 308-2058. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

TJK

TJK
April 3, 2003


Michael W. Ball
Supervisory Patent Examiner
Technology Center 1700